**CMSC 150 Fall 2022**

**Game (200 points available)**

**Part 1 Hand-in: Midnight Thursday November 17**

**Final Hand-in: Midnight Friday December 9**

Create a game containing all the following elements. If you want to create a different type of game which does not contain all of these elements, **talk to me or email me first** about it.

1. You need to provide a page of instructions (created with Word or something like that) for playing the game and a page of instruction as part of the game. (10 points)
2. The game should contain **at least two** sprites**,** at least one of which is moving. The sprites must be different graphics from those used in the textbook. (20 points)
3. At least one of the sprites must be **controllable by the player**, using either the mouse or the keyboard (or both). (25 points)
4. At least some of the sprites should **interact in some way**; e.g. when they collide, something interesting should happen. (20 points)
5. The game should contain some **random element**, so that even if the player does exactly the same thing, the game will be different each time. (15 points)
6. Some **measure of player performance** should be shown and updated as the game proceeds. (10 points)
7. The game should get *harder* in some way, if the player *performs well*. (10 points)
8. **Amount of effort** – how much effort was put into the program, how different is the game from the textbook games. (30 points)

1. **Artistic impression** – use of colors, text, sound, and so on - everything that contributes to the overall game experience. Note, I will not take off for sprites that have squares or rectangles around them. This is sometimes hard to avoid – especially in Arcade. (30 points)
2. **Code quality: Rate your own code** out of 10 on each of the following aspects: (30 points)
   * + - 1. Descriptive variable and method names. 10
         2. All numbers replaced by variables. 8
         3. No unnecessary variables. 10
         4. Blank lines separating methods in a class, also separating major loops. 10
         5. No long methods.5
         6. No violations of the “DRY” rule. 10
         7. All method and variable names begin with small letters; All class names begin with capital letters. 10
         8. No unnecessary code; no commented-out code. 10
         9. Appropriate use of comments. 10
         10. Consistent style. 10

**Due on November 175h: (70 points)**

1. Description of your game, how you play, how it is scored, and how it gets harder with time. (10 points)
2. Initial program with your initial plan for background, sprite images shown on it (not necessarily working yet), sounds, etc.. This may change as you go forward and that is ok

(10 points)

1. Description of how each sprite will move and all user interactions with the game

(10 points)

1. Pseudo code for the main and each sprite class you plan to implement (10 points)

**Due on December 9th: (Remaining 130 points)**

Once your program is ready, create a **zipped folder** containing:

1. Your program (ONE or more .py files).
2. The batch file used to run the program.
3. ALL image, sound and other files used in the program.
4. A document containing your answers to Question 10.

The zipped file-name should include the **name of your game** and **your name** e.g. FindTheGold\_Carolyn.zip .

Then MOVE the zipped folder to somewhere else on your computer, unzip it, and double-click on the batch file.

MAKE SURE THE GAME WORKS CORRECTLY